Microsoft Excel. The model compares the cost-effectiveness of standard diagnostics with the one of ILR-enhanced diagnostic pathways. Number of positive diagnoses was used as the outcome measure. The number of diagnostic tests per patient and the yield of each test were found in published clinical literature. Cost data were taken from Dutch national sources. Sensitivity analyses were conducted using Monte Carlo Simulation. **RESULTS:** Literature and sensitivity analyses clearly show that the ILR-based pathway has a significantly higher capacity of providing a correct diagnosis (33.7% vs. 4.1%) within the same timeframe. The cost per diagnosis in the ILR-based pathway was slightly higher than the cost per diagnosis of more conventional care (approximately €1200 more needed per diagnosis with ILRs). **CONCLUSIONS:** ILRs can be considered an established, safe and efficient addition to syncope diagnostics. They provide physicians with excellent diagnostic yield, enabling timely and correct treatment of patients whose condition could remain undiagnosed. Cost per diagnosis demonstrates the cost-effectiveness of their use. Potentially, ILRs can also reduce time-to-diagnosis and operational expenditure of the hospital. Should that be the case, ILRs can be even more cost-effective while enabling more patients to get life-saving treatment faster.

PCV49

COST-EFFECTIVENESS OF ATORVASTATIN 80 MG VS GENERIC SIMVASTATIN 20 TO 40 MG IN SECONDARY PREVENTION IN SPAIN

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OBJECTIVES: The IDEAL trial (Incremental Decrease in End Points through Aggressive Lipid Lowering) was an open label, blinded endpoint evaluation of 8888 patients with history of acute myocardial infarction (MI) who were randomized to atorvastatin 80 mg or simvastatin 20–40 mg. The median follow-up was 4.8 years. Major coronary events (coronary death, hospitalization for MI, or resuscitated cardiac arrest) were reduced by 11%, (hazard ratio [HR], 0.89; 95% confidence interval [CI], 0.78, 1.01; P = 0.07). There was a 16% relative risk reduction in all cardiovascular events (HR 0.84, 95% CI: 0.76 to 0.91). The objective of the study was to asses the cost-effectiveness ratio of atorvastatin 80 mg versus simvastatin 20–40 mg among patients with history of coronary heart disease (CHD) in Spain taking into account all CV events. **METHODS:** A within trial pharmacoeconomic analysis was developed to estimate cost per event avoided. Direct (hospitalization, drugs) and indirect costs (lost production due to work absence) were included in the model. To estimate the cost of these hospitalizations, drug reimbursement group (DRG) was used. Effectiveness was estimated as the number of events in both arms. **RESULTS:** After 4.8 years, treatment with intensive atorvastatin could avoid 1 in 6 CV events compared with moderate simvastatin therapy among patients with CHD. Despite atorvastatin having a higher drug cost, this was offset by lower cost of reduced hospitalizations and work days lost for patients receiving atorvastatin treatment. Using Spanish costs the incremental cost for atorvastatin to avoid an event was €15,168. **CONCLUSIONS:** In a cohort of 8888 Spanish patients with CHD one cardiovascular event could be prevented for cost of €1520 euros/patient over 4.8 years. Based on these results, it appears that even in a low cost generic market, high dose atorvastatin is a good option compared to standard therapy with simvastatin.

PCV50

COST-EFFECTIVENESS OF RULING OUT DEEP VENOUS THROMBOSIS IN PRIMARY CARE VERSUS CARE AS USUAL

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OBJECTIVES: The timely diagnosis of deep venous thrombosis (DVT) is critical because this disorder can be life threatening. However, referring all patients suspected of DVT for ultrasound (US) testing is inefficient since 80 to 90% of those referred have no DVT. Therefore, we investigated the cost-effectiveness of a diagnostic strategy based on a point of care d-dimer test combined with a clinical decision rule that was documented to be safe in primary care (AMUSE study). **METHODS:** A model based cost-effectiveness analysis was conducted in conjunction with a recent multi centre prospective diagnostic study (AMUSE, N = 1002). A Markov model with a five year time horizon was used to compare the AMUSE strategy to two hospital based strategies: ultrasound for all and a hospital decision rule. Probabilities were derived from AMUSE and the literature. Societal costs and health state utilities were used. One way and probabilistic sensitivity analyses were conducted. Cost-effectiveness acceptability curves were constructed. **RESULTS:** The AMUSE strategy has both slightly lower costs and less quality adjusted life years (QALYs) than both hospital based strategies. The ultrasound for all strategy has the highest costs and QALYs, but is not cost-effective as compared the hospital decision rule strategy. The AMUSE strategy compared to the hospital decision rule strategy resulted in a mean saving of €138, and a mean QALY loss of 0.002. The incremental cost-effectiveness ratio is €56,436 per QALY lost. The cost-effectiveness acceptability curves show that the AMUSE strategy has the highest probability of being cost-effective, even exceeding ceiling ratios of €80,000 per QALY. **CONCLUSIONS:** The AMUSE strategy to exclude DVT in primary care is not only safe, but also has the highest probability of being cost-effective as compared to hospital based strategies to diagnose DVT.

PCV51

SINGLE PILL AMLODIPINE/ATORVASTATIN IS COST-EFFECTIVE FOR THE PRIMARY PREVENTION OF CARDIOVASCULAR DISEASE IN KOREA

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OBJECTIVES: Hypertension and dyslipidemia are highly prevalent, often concurrent and act independently, as well as together, to increase the risk of cardiovascular disease (CVD). This study sought to investigate the cost-effectiveness of a single-pill combination of amlodipine/atorvastatin (SPAA) for the primary prevention of CVD (comprising coronary heart disease and ischemic stroke) in Korea. **METHODS:** A Markov model was developed with four health states: 'Alive without CVD', 'Alive with CVD', 'Dead from CVD' and 'Dead from non-CVD causes', The model cohort used comprised 171 Korean adults aged ≥55 years from the 2005 Korea National Health and Nutritional Examination Survey (KNHANES) who were CVD-free but met current Korean criteria for treatment with SPAA. Follow-up was simulated for 40 years. Cardiovascular risk was estimated for each subject individually using a published, multivariable, Asian-specific equation. With subsequent cycles, the cardiovascular risk profile of each subject was updated. Data regarding the

dose-specific efficacy of SPAA at reducing systolic blood pressure and total cholesterol were drawn from published clinical trial data (RESPOND), while costs were sourced from Korean pharmaceutical pricing lists. SPAA comprised weighted average doses of the fixed-dose combinations of amlodipine 5 mg / atorvastatin 10 mg and 5 mg/20 mg, based on market distribution in Korea. A 20% price reduction after one year was implemented to reflect patent expiry. Costs of CVD were derived from 2008 Korean Health Insurance Review and Assessment Service (HIRA) estimates. Utility values for CVD were obtained from published literature based on 2005 KNHANES data. **RESULTS:** Compared to placebo (no treatment), the incremental cost-effectiveness ratios associated with SPAA were 1,428,681 Korean won (KW)/QALY and 1,989,858 KW/YoLS. (One thousand KW equates to approximately one US dollar.) Sensitivity analyses indicated these results to be robust. **CONCLUSIONS:** SPAA represents a cost-effective strategy for the primary prevention of CVD in Korea.

PCV52

COST-UTILITY ANALYSIS OF HOME TELEMONITORING IN ELDERLY PATIENTS WITH CHRONIC HEART FAILURE

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OBJECTIVES: Chronic heart failure (CHF) is associated with a substantial clinical and economic burden that impacts significantly on health care systems. The objective of this study is to assess the cost-utility of a new home telemonitoring (HTM) project in elderly CHF outpatients. **METHODS:** This prospective, 6-month, randomised trial was designed to compare the cost-effectiveness of a HTM project versus usual care (UC) in elderly patients with CHF, receiving optimal treatment and counselling. A total of 24 patients (aged 66–92 years) were assigned randomly to HTM or UC. At baseline and at the end of the study, all patients had a complete cardiologist's assessment, including quality of life. The evaluation of the cost of HTM includes the cost of drug therapy, monitoring, treating side-effects, hospitalizations and devices. All costs were calculated from a third-party payer perspective, in 2007 Euros. **RESULTS:** The mean duration of the follow-up was similar for the two groups (136.92 ± 36.65 days, $P > 0.05$). There was a non-statistically significant reduction in hospital readmissions, hospitalisation days, physicians' visits, laboratory tests and total costs ($P > 0.05$) for HTM group. However, HTM was associated with a significant improvement in the QoL measured with the generic health-related EQ-5D questionnaire (10.00 ± 7.24, $P < 0.001$) and a small incremental gain of 0.13 ± 0.24 quality-adjusted-life-years (QALYs) over UC. The analysis showed that the average incremental cost of HTM was €12,909 ± €53,313/QALY gained. **CONCLUSIONS:** HTM is likely to be a cost-effective intervention compared with UC in elderly CHF outpatients in Greece. However, further studies with more patients and longer duration are needed to confirm these results.

PCV53

DECISION ANALYTIC MODEL FOR GENETIC TESTING IN THE MANAGEMENT OF WARFARIN ANTICOAGULATION TREATMENT FOR HOSPITALIZED PATIENTS

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OBJECTIVES: To investigate the potential benefit of adding genetic testing to a pharmacist-managed anticoagulation service for hospitalized patients on warfarin. **METHODS:** Using decision analytic modeling we constructed a decision tree model. The decisions used were a treat-all and a treat-none approach. The outcome of interest was minimizing the number of adverse events (bleeding or thrombitic event). Model parameters were primarily based on institutional data. Additional information from the literature or expert opinion was used if needed. One-way sensitivity analyses were performed on unknown parameters to determine decision thresholds. Two parameters, percentage of patients benefiting from testing and rate of reduction of adverse event rates due to genetic test results, were given special attention as no prior information is available. Probabilistic sensitivity analysis was also conducted. A willingness-to-pay of $35,000 per avoided adverse event was used as the decision threshold. **RESULTS:** Sensitivity analysis showed the decision choice to be affected by the values of both parameters of interest (20% prevalence and 8% reduction respectively). Baseline analysis resulted in the treat-all approach to cost an additional $102 per patient on average and avoid 8 adverse events per 10,000 patients. Probabilistic analysis determined the point at which each decision was equally likely to be optimal was at a willingness-to-pay of $140,000. Holding the reduction rate constant the rate of patients benefitting from the test would need to be as high as 40% before the treat-all approach becomes optimal. Similarly, the reduction rate would need to be as high as 16% for the treat-all approach to be optimal. **CONCLUSIONS:** The percentage of patients that would benefit from testing, as well as the reduction in adverse event rates due to testing, influence the decision of treatment approach. The addition of testing all patients could potentially be cost-effective with sufficiently high enough prevalence and adverse event reduction rates.

PCV54

A EUROPEAN MULTI-COUNTRY COMPARISON OF THE COST-EFFECTIVENESS OF IODIXANOL VERSUS IOHEXOL BASED ON THE RESULTS OF THE NEPHRIC CLINICAL TRIAL

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OBJECTIVES: Contrast-induced adverse drug reactions (ADRs), including contrast-induced nephropathy, are common among high-risk patients undergoing angiography (e.g., patients with diabetes mellitus and renal impairment). These ADRs cause extended hospital stays and additional medication use, leading to increased cost. We examine the cost-effectiveness of the use of 2 contrast media, in patients at high risk of contrast-induced ADRs, from the perspective of 5 European countries (Germany, Italy, Spain, Sweden, and UK). **METHODS:** A multi-country decision-analytic model was constructed to estimate the cost-effectiveness of an isosmolar contrast agent (iodixanol) compared to a low-osmolar contrast medium (iohexol). The emphasis of the model was to consider differences in the incidence of severe ADRs in patients at high risk of contrast-induced nephropathy. The analysis was based on a European randomised controlled trial (NEPHRIC), in which patients receiving angiography with iodixanol had statistically fewer severe ADRs than those with iohexol. Patients in the study were 18 years of age or older, referred for coronary or aortofemoral angiography, and had diabetes with stable serum creatinine concentrations (men: 1.5 to 3.5 mg/dL; women: 1.3 to 3.5 mg/dL). ADRs considered included acute renal failure, arrhythmia, cardiovascular events, pulmonary edema, and multiple-organ failure. Resource use, including hospital days, medical visits, contrast medium, medications, laboratory tests and hospital procedures, were obtained from the NEPHRIC clinical